1600 0280 0240

1635

RAW SEQUENCE LISTING DATE: 12/17/2001
PATENT APPLICATION: **US/10/006,911** TIME: 10:45:25

Input Set : **A:\RTS-0200 Sequence Listing.txt**
Output Set: **N:\CRF3\12172001\J006911.raw**

6 <110> APPLICANT: William Gaarde
7 Andrew T. Watt
9 <120> TITLE OF INVENTION: ANTISENSE MODULATION OF COLLAPSIN RESPONSE MEDIATOR PROTEIN
2 EXPRESSION
11 <130> FILE REFERENCE: RTS-0200
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/006,911
C--> 13 <141> CURRENT FILING DATE: 2001-11-08
13 <160> NUMBER OF SEQ ID NOS: 89
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 20
18 <212> TYPE: DNA
19 <213> ORGANISM: Artificial Sequence
21 <220> FEATURE:
23 <223> OTHER INFORMATION: Antisense Oligonucleotide
25 <400> SEQUENCE: 1
26 tccgtcatcg ctcctcaggg 20
29 <210> SEQ ID NO: 2
30 <211> LENGTH: 20
31 <212> TYPE: DNA
32 <213> ORGANISM: Artificial Sequence
34 <220> FEATURE:
36 <223> OTHER INFORMATION: Antisense Oligonucleotide
38 <400> SEQUENCE: 2
39 atgcattctg cccccaagga 20
42 <210> SEQ ID NO: 3
43 <211> LENGTH: 5421
44 <212> TYPE: DNA
45 <213> ORGANISM: Homo sapiens
47 <400> SEQUENCE: 3
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49 tgactgaaaa aaatgactag ttattatgaa gacactactg ttgaagatgg atattttaac 120
50 atggagtttc aacaaaatta cttcttgaga cagagctgat gtgtttttta ataacgtga 180
51 ttttaagcat atatttgaac aaaactaaaa catttagtat tatgaatatg aaaaaagatc 240
52 agtaaatcaa tgtactcttc taggctgaat taaggtagac tatttaaggt ttcaaaaaag 300
53 tttggctggg gcagaataag ttttacaaaa cccatgccat ccaaaattaa gatgacatgt 360
54 agcagcaaga agtattccaa tgtctcataa ccagttctcg caagcaatgt gtattcctta 420
55 ctttaaggaa gtgtcaaaca aatagaaaaa tctggaagaa tttactaagt gtaataaatt 480
56 agaggtaaat cgtaataaaa gaatttatgt ctcacaaaaa tattcacaag tgggagtttt 540
57 cttttaccaa cttctcagag tccttctagc cccctcttca cttctgaaag atgggattta 600
58 ccaaaatctg gtttacattt aacttttcag ggacacatga cctgaaaaga aagatgtcag 660
59 ataatactga cattgcctca tgcactttct ttgtatcagt ccttcttctg taagtaatca 720
60 gaattgggtc caaatggcat agaatcaaac attatgtatc atgccaaata ccacttcctg 780
61 cccaacaaaa tttcatcttt ctccagtaat gaagaggtgg acattcttgt tggactgtag 840
62 catctgtgcc gcccgctcca caccaaccac ggcagctaac ctctgggcat catatttgga 900
63 gtagagaaca gtgcaggtcc acgtggcctc ttctcctctg ttggtggctc tcagcatatt 960
64 acagatttca ctgtaaaagt gtggatatgt cggcagttca tagaaaatca ggttcctgat 1020
65 gccttttatt gctgtagttt atttccaccc ccttccctcc tgttttctct ctctccttct 1080
66 ctctctctct ctctctctct ttttttttccg ccctagctgg ggctgtgttg gaggagagga 1140

RAW SEQUENCE LISTING DATE: 12/17/2001
PATENT APPLICATION: **US/10/006,911** TIME: 10:45:25

Input Set : **A:\RTS-0200 Sequence Listing.txt**
Output Set: **N:\CRF3\12172001\J006911.raw**

67 agaaagagag acagaggatt gcattcatcc gttacgttct tgaaatttcc taatagcaag 1200
68 accagcgaag cggttgcacc cttttcaatc ttgcaaagga aaaaaacaaa acaaaacaaa 1260
69 aaaaacccaa gtccccttcc cggcagtttt tgccttaaag ctgccctctt gaaattaatt 1320
70 ttttcccagg agagagatgt cttatcaggg gaagaaaaat attccacgca tcacgagcga 1380
71 tcgtcttctg atcaaaggag gtaaaattgt taatgatgac cagtcgttct atgcagacat 1440
72 atacatggaa gatgggttga tcaagcaaat aggagaaaat ctgattgtgc caggaggagt 1500
73 gaagaccatc gaggcccact cccggatggt gatccccgga ggaattgacg tccacactcg 1560
74 tttccagatg cctgatcagg gaatgacgtc tgctgatgat ttcttccaag gaaccaaggc 1620
75 ggccctggct gggggaacca ctatgatcat tgaccacgtt gttcctgagc ctgggacaag 1680
76 cctgctcgct gcctttgacc agtggaggga atgggccgac agcaagtcct gctgtgacta 1740
77 ctctctgcat gtggacatca gcgagtggca taagggcatc caggaggaga tggaagcgct 1800
78 tgtgaaggat cacggggtaa attccttcct cgtgtacatg gctttcaaag atcgcttcca 1860
79 gctaacggat tgccagattt atgaagtact gagtgtgatc cgggatattg gcgccatagc 1920
80 ccaagtccac gcagaaaatg gcgacatcat tgcagaggag cagcagagga tcctggatct 1980
81 gggcatcacg ggccccgagg gacatgtgct gagccgacct gaggaggtcg aggccgaagc 2040
82 cgtgaatcgt gccatcacca tcgccaacca gaccaactgc ccgctgtata tcaccaaggt 2100
83 gatgagcaaa agctctgctg aggtcatcgc ccaggcacgg aagaagggaa ctgtggtgta 2160
84 tggcgagccc atcactgcca gcttgggaac ggacggctcc cattactgga gcaagaactg 2220
85 ggccaaggct gctgcctttg tcacctcccc acccttgagc cctgatccaa ccactccaga 2280
86 ctttctcaac tccttgctgt cctgtggaga cctccaggtc acgggcagtg cccattgcac 2340
87 gtttaacact gcccagaagg ctgtaggaaa ggacaacttc accctgattc cggagggcac 2400
88 caatggcact gaggagcgga tgtccgtcat ctgggacaag gctgtggtca ctgggaagat 2460
89 ggatgagaac cagtttgtgg ctgtgaccag caccaatgca gccaaagtct tcaaccttta 2520
90 ccccccggaaa ggccgcattg ctgtgggatc cgatgccgac ctggtcatct gggaccccga 2580
91 cagcgttaaa accatctctg ccaagacaca caacagctct ctcgagtaca acatctttga 2640
92 aggcatggag tgccgcggct ccccactggt ggtcatcagc caggggaaga ttgtcctgga 2700
93 ggacggcacc ctgcatgtca ccgaaggctc tggacgctac attccccgga agcccttccc 2760
94 tgattttgtt tacaagcgta tcaaggcaag gagcaggctg gctgagctga gaggggttcc 2820
95 tcgtggcctg tatgacggac ctgtgtgtga agtgtctgtg acgcccaaga cagtcactcc 2880
96 agcctcctcg gccaagacgt ctcctgccaa gcagcaggcc ccacctgtcc ggaacctgca 2940
97 ccagtctgga ttcagtttgt ctggtgctca gattgatgac aacattcccc gccgcaccac 3000
98 ccagcgtatc gtggcgcccc ccggtggccg tgccaacatc accagcctgg gctagagctc 3060
99 ctgggctgtg cgtccactgg ggactgggga tgggacacct gaggacattc tgagacttct 3120
100 ttcttccttc cttttttttt tttgtttttt tttttaagag cctgtgatag ttactgtgga 3180
101 gcagccagtt catggggtcc cccttgggcc cacaccccgt ctctcaccaa gagttactga 3240
102 ttttgctcat ccacttccct acacatctat gggtatcaca cccaagacta cccaccaagc 3300
103 tcatacaggg aaccacaccc aacacttaga catgcgaaca agcagccccc agcgagggtc 3360
104 tccttcgcct tcaacctcct agtgtctgtt agcattcctt ttcatggggg gagggaagat 3420
105 aaagtgaatt gcccagagct gccttttttct tttcttttta aaaattttaa gaagttttcc 3480
106 ttgtggggct ggggaggggc cggggtcagg gagagtcttt tttttttttt ttttaaatac 3540
107 taaattggaa catttaattc catattaata caaggggttt gaactggaca tcctaatgat 3600
108 gcaattacgt catcacccag ctgattccgg gtggttggca aactcatcgt gtctgtcctg 3660
109 agaggctcca caatgcccac ccgcatcgcc attctgtagt cttcagggtc agctgttgat 3720
110 aaaggggcag gcttgcgtta ttggcctaga ttttgctgca gattaaatcc tttgaggatt 3780
111 ctcttctctt ttaccatttt tctgcgtgct ctcactctct ctttctctct ctagcttttt 3840
112 aattcatgaa tattttcgtg tctgtctctc tctctctctg tgtttcctcc agcccttgtc 3900
113 tcggagacgg tgttttcctc ccttgcccca ttatcttttc acctcccagg tctacatttc 3960
114 atggtggtcg ttgggtccgc ctaaaggatt tgagcgtttg ccattgcaag catagtgctg 4020
115 tgtcatcctg gtccatgtag gactggtgct aaccacctgc catcatgagg atgtgtgcta 4080

RAW SEQUENCE LISTING DATE: 12/17/2001
PATENT APPLICATION: US/10/006,911 TIME: 10:45:25

Input Set : A:\RTS-0200 Sequence Listing.txt
Output Set: N:\CRF3\12172001\J006911.raw

116 gagtgtggga ccctggccaa gtgcaggaat gggccatgcc gtctcaccca cagtatcaca 4140
117 cgtggaaccg cagacagggc ccagaagctt tagaggtatg aggctgcaga accggagaga 4200
118 ttttcctctg tgcagtgctc tctggctaaa gtcacggtca aacctaaaca ccgagcctca 4260
119 ttaacccaag tgaaccaacc aaagtcacca gttcagaagt gctaagctaa taggagtctg 4320
120 acccgagggc ctgctgcttc ctggttaagt atcttttgag attctagaac acatgggagc 4380
121 tttttatttt cggggaaaaa ccgtattttt ttcttgtcca attatttcta aagacacact 4440
122 acatagaaag aggccctata aactcaaaaa gtcattggga aacttaaagt ctattctact 4500
123 ttgccaagag gagaaatgtg ttttatgaac gatagatcac atcagaactc ctgtggggag 4560
124 gaaaccttat aaattaaaca catggccccc ttagagacca caggcgatgt ctgtctccat 4620
125 ccttccctct cctttttctgt caccttttccc cctagctggc tcctttggac ctacccctgt 4680
126 ccttgctgac ttgtgttgca ttgtattcca aacgtgttta caggttctct taagcaatgt 4740
127 tgtatttgca ggcttttctg aataccaaat ctgctttttg taaagcgtaa aaacatcaca 4800
128 aagtaggtca ttccatcacc acccttgtct ctctacacat tttgcctttg gggatctggt 4860
129 tggggttttg ggtttttttgt tgttgttgtt tatttgttat tttaaaggta aattgcactt 4920
130 ttaaaaaaat aattggttga cttaatatat ttgctttttt tctcacctgc acttagagga 4980
131 aatttgaaca agttggaaaa aaacaatttt tgtttcaatt ctaagaaaca cttgcagctc 5040
132 tagtattcac ttgagtcttc ctgtttttcc tgtaccgggt catggtaatt tttggttgtt 5100
133 ttggttgttt tcttaaaaaa caagttaaaa cctgacgatt tctgcagtga cttgatgctc 5160
134 taaaacagtg taggatttaa gaatagatgg tttttaatcc tggaaattgt gattgtgacc 5220
135 catgagtgga ggaactttca gttctaaagc tgataaagtg tgtagccaga agagtacttt 5280
136 ttttttgtaa ccactgtctt gatggcaaaa taattatggt aaaaaaacaag tctcgtgttt 5340
137 attattcctt aagaactctg tgttatatta ccatggaacg cctaataaag caaaatgtgg 5400
138 ttgtttcaaa aaaaaaaaaa a 5421
141 <210> SEQ ID NO: 4
142 <211> LENGTH: 21
143 <212> TYPE: DNA
144 <213> ORGANISM: Artificial Sequence
146 <220> FEATURE:
148 <223> OTHER INFORMATION: PCR Primer
150 <400> SEQUENCE: 4
151 gctgcagaac cggagagatt t 21
154 <210> SEQ ID NO: 5
155 <211> LENGTH: 21
156 <212> TYPE: DNA
157 <213> ORGANISM: Artificial Sequence
159 <220> FEATURE:
161 <223> OTHER INFORMATION: PCR Primer
163 <400> SEQUENCE: 5
164 gggttaatga ggctcggtgt t 21
167 <210> SEQ ID NO: 6
168 <211> LENGTH: 30
169 <212> TYPE: DNA
170 <213> ORGANISM: Artificial Sequence
172 <220> FEATURE:
174 <223> OTHER INFORMATION: PCR Probe
176 <400> SEQUENCE: 6
177 cagtgctctc tggctaaagt cacggtcaaa 30
180 <210> SEQ ID NO: 7
181 <211> LENGTH: 19

RAW SEQUENCE LISTING DATE: 12/17/2001
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Input Set : **A:\RTS-0200 Sequence Listing.txt**
Output Set: **N:\CRF3\12172001\J006911.raw**

<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR Primer
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gaaggtgaag gtcggagtc 19
<210> SEQ ID NO: 8
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR Primer
<400> SEQUENCE: 8
gaagatggtg atgggatttc 20
<210> SEQ ID NO: 9
<211> LENGTH: 20
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: PCR Probe
<400> SEQUENCE: 9
caagcttccc gttctcagcc 20
<210> SEQ ID NO: 10
<211> LENGTH: 2000
<212> TYPE: DNA
<213> ORGANISM: Homo sapiens
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<400> SEQUENCE: 10
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tggatatgaa agtaaattta gatattaatg tgaagcaaat ttagacaacg tgtgtacata 120
tgtgtgtgca tacatgtaca caattcccaa gttctgacca ctgagcctgg gatgagtggc 180
accacaatag taagcactcc aatctaacct tttataataa tttcctacta aaagcaagca 240
gggctggagt agagaaacct ggaatgtctc attgtcaaaa aatacagcag tgcccaagta 300
gatgggggac atgtcaaaag tacacagggg ctaacctgaa ggtgctccca gcggccatat 360
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aagatggata ttttaacatg gagtttcaac aaaattactt cttgagacag agctgatgtg 840
ttttttaaat aacgtgattt taagcatata tttgaacaaa actaaaacat ttagtattat 900
gaatatgaaa aaagatcagt aaatcaatgt actcttctag gctgaattaa ggtagactat 960
ttaaggtttc aaaaaagttt ggctggggca gaataagttt tacaaaaccc atgccatcca 1020
aaattaagat gacatgtagc agcaagaagt attccaatgt ctcataacca gttctcgcaa 1080
gcaatgtgta ttccttactt taaggaagtg tcaaacaaat agaaaaatct ggaagaattt 1140
actaagtgta ataaattaga ggtaaatcgt aataaaagaa tttatgtctc acaaaaatat 1200
tcacaagtgg gagttttctt ctaccaactt ctcagagtcc ttctagcccc ctcttcactt 1260

RAW SEQUENCE LISTING DATE: 12/17/2001
PATENT APPLICATION: **US/10/006,911** TIME: 10:45:25

Input Set : **A:\RTS-0200 Sequence Listing.txt**
Output Set: **N:\CRF3\12172001\J006911.raw**

249 ctgaaagatg ggatttacca aaatctggtt tacatttaac ttttcaggga cacatgacct 1320
250 gaaaagaaag atgtcagata atactgacat tgcctcatgc actttctttg tatcagtcct 1380
251 tcttctgtaa gtaatcagaa ttgggtccaa atggcataga atcaaacatt atgtatcatg 1440
252 ccaaatacca cttcctgccc aacaaaattt catttttctc cagtaatgaa gaggtggaca 1500
253 ttcttgttgg actgtagcat ctgtgccgcc cgctccacac caaccacggc agctaacctc 1560
254 tgggcatcat atttggagta gagaacagtg caggtccacg tggcctcttc tcctctgttg 1620
255 gtggctctca gcatattaca gatttcactg taaaagtgtg gatatgtcgg cagttcatag 1680
256 aaaatcaggt tcctgatgcc ttttattgta tacctgtcag aattggaaag aaagagctat 1740
257 gtcaacttga gaaacaagtt ctagaaaaac tacctaggag ttgtacagag gcatagttca 1800
258 tgcttgttgc ttcctgctaa tggagaaaaa cagtggcaca agtaacagaa caaaagttat 1860
259 tctaacttga ggtggcaaca tatttgaatt ctttttatga caacatattc gaattcctaa 1920
260 tatttggctt aagaaaatga taaaataaat acacatttct tgatcctaca ctgggtaggc 1980
261 tgaggtatca tgggaaagaa 2000
264 <210> SEQ ID NO: 11
265 <211> LENGTH: 4459
266 <212> TYPE: DNA
267 <213> ORGANISM: Homo sapiens
269 <400> SEQUENCE: 11
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271 ctgtgttgga ggagaggaag aaagagagac agaggattgc attcatccgt tacgttcttg 120
272 aaatttccta atagcaagac cagcgaagcg gttgcaccct tttcaatctt gcaaaggaaa 180
273 aaaacaaaac aaaacaaaaa aaacccaagt ccccttcccg gcagtttttg ccttaaagct 240
274 gccctcttga aattaatttt ttcccaggag agagatgtct tatcagggga agaaaaatat 300
275 tccacgcatc acgagcgatc gtcttctgat caaaggaggt aaaattgtta atgatgacca 360
276 gtcgttctat gcagacatat acatggaaga tgggttgatc aagcaaatag gagaaaatct 420
277 gattgtgcca ggaggagtga agaccatcga ggcccactcc cggatggtga tccccggagg 480
278 aattgacgtc cacactcgtt tccagatgcc tgatcaggga atgacgtctg ctgatgattt 540
279 cttccaagga accaaggcgg ccctggctgg gggaaccact atgatcattg accacgttgt 600
280 tcctgagcct gggacaagcc tgctcgctgc ctttgaccag tggagggaat gggccgacag 660
281 caagtcctgc tgtgactact ctctgcatgt ggacatcagc gagtggcata agggcatcca 720
282 ggaggagatg gaagcgcttg tgaaggatca cggggtaaat tccttcctcg tgtacatggc 780
283 tttcaaagat cgcttccagc taacggattg ccagatttat gaagtactga gtgtgatccg 840
284 ggatattggc gccatagccc aagtccacgc agaaaatggc gacatcattg cagaggagca 900
285 gcagaggatc ctggatctgg gcatcacggg ccccgaggga catgtgctga gccgacctga 960
286 ggaggtcgag gccgaagccg tgaatcgtgc catcaccatc gccaaccaga ccaactgccc 1020
287 gctgtatatc accaaggtga tgagcaaaag ctctgctgag gtcatcgccc aggcacggaa 1080
288 gaagggaact gtggtgtatg gcgagcccat cactgccagc ttgggaacgg acggctccca 1140
289 ttactggagc aagaactggg ccaaggctgc tgcctttgtc acctccccac ccttgagccc 1200
290 tgatccaacc actccagact ttctcaactc cttgctgtcc tgtggagacc tccaggtcac 1260
291 gggcagtgcc cattgcacgt ttaacactgc ccagaaggct gtaggaaagg acaacttcac 1320
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293 tgtggtcact gggaagatgg atgagaacca gtttgtggct gtgaccagca ccaatgcagc 1440
294 caaagtcttc aacctttacc cccggaaagg ccgcattgct gtgggatccg atgccgacct 1500
295 ggtcatctgg gaccccgaca gcgttaaaac catctctgcc aagacacaca acagctctct 1560
296 cgagtacaac atctttgaag gcatggagtg ccgcggctcc ccactggtgg tcatcagcca 1620
297 ggggaagatt gtcctggagg acggcaccct gcatgtcacc gaaggctctg gacgctacat 1680
298 tccccggaag cccttccctg attttgttta caagcgtatc aaggcaagga gcaggctggc 1740
299 tgagctgaga ggggttcctc gtggcctgta tgacggacct gtgtgtgaag tgtctgtgac 1800
300 gcccaagaca gtcactccag cctcctcggc caagacgtct cctgccaagc agcaggcccc 1860

VERIFICATION SUMMARY DATE: 12/17/2001
PATENT APPLICATION: **US/10/006,911** TIME: 10:45:26

Input Set : **A:\RTS-0200 Sequence Listing.txt**
Output Set: **N:\CRF3\12172001\J006911.raw**

L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1363 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:3
L:1366 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:89
L:1366 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:3
L:1370 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:89
L:1370 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:4
L:1371 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:89
L:1371 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:4